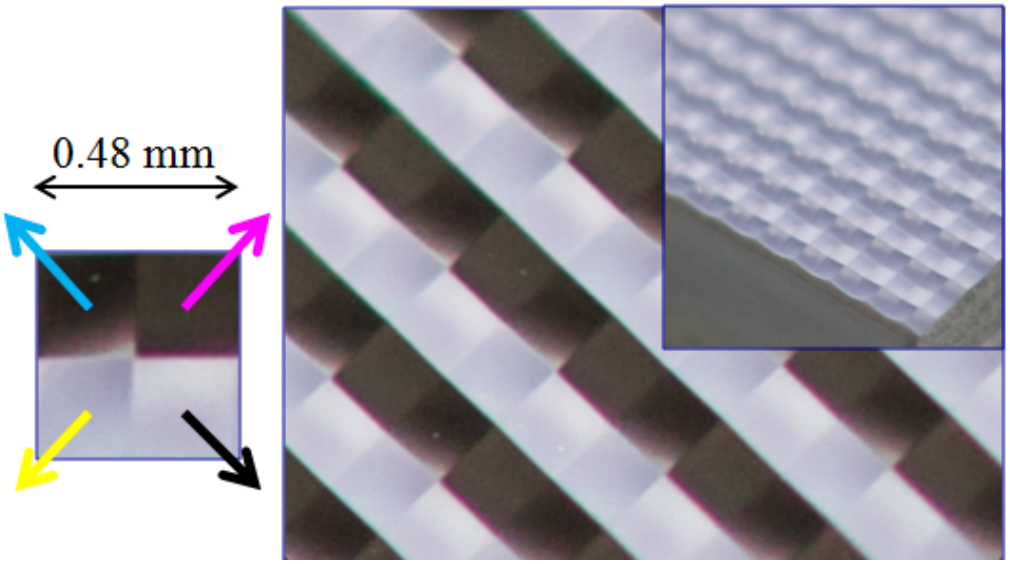
IFU design and accommodation

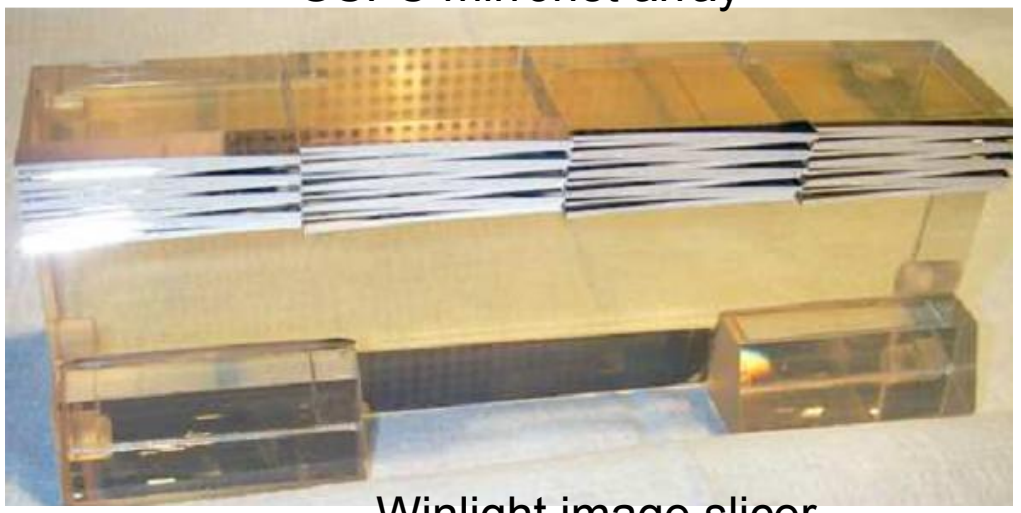
- Various kinds of image slicers have been developed or are in development
  - Flat faceted reflective (eg CNES)
  - Lenslet based
  - Fiber based
  - Mirrorlet array
- For this study we want an existence proof design to allow specific statements in the report of the potential science enhancement and/or exposure time savings vs. the baseline slitless prism.
- We discussed a GSFC approach under development (for Heliophysics and earth science applications) based on mirrorlet array
- We are also talking to Winlight (CNES spinoff)

- 4 mirrors (spherical) with different x,y tilts in a unit cell



GSFC mirrorlet array

- Long slices, with pupil reimaging mirrors, to produce single long reimaged slit



Winlight image slicer

Near term plan

- Examine commercially available slicers
- Compare to in-house micromirror array
  - TRL, cost, packaging implications
- Design IFU based on one of these
  - IFU breaks down into 3 optical sections:
    - Telescope & relay – need large f# to feed any of these slicers
    - Slicer
    - Back end spectrograph
  - Most of the development and risk is in the slicer
- Package with AFTA WFIRST instrument as time allows